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## Epidemiology and treatment of mental disorders in a rapidly developing urban region in China

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# **CHAPTER 8**

**Summary**

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## SUMMARY

This thesis presented results of the Tianjin mental Health Survey (TJMHS). The first aim was to estimate the 1-month ('current') and lifetime prevalence of DSM-IV mental disorders and their sociodemographic determinants in adults aged 18 years of age and older. The second aim was to assess mental health literacy (MHL) and the level of stigmatization of mentally ill individuals among community members. The third aim was to assess help-seeking behavior for psychological problems across formal and informal care settings and the level of unmet need for mental health services among individuals with and without mental disorders. The final aim was to evaluate the currently available mobile mental health applications in China.

Chapter 2 provides a detailed overview of the sampling methods, instruments, and survey procedures used in the TJMHS. A two-phase design including a screening phase and a diagnostic phase was used in the TJMHS. An expanded version of the General Health Questionnaire-12 was used to identify an enriched sample of individuals at risk of mental disorders in the first screening phase. The SCID was administered in the second diagnostic phase to determine whether or not a DSM-IV mental disorder diagnosis was present. Rigorous training, sampling and quality control methods were adopted to optimize the quality of the survey results.

In Chapter 3 the prevalence and age-of-onset and the correlates of mental disorders in adults aged 18 years of age and older are presented. We found that the lifetime and 1-month prevalence rates of any mental disorder were 23.6% and 12.8%, respectively. Mood disorders, anxiety disorders and substance use disorders were the most prevalent mental disorders. Being divorced/widowed, having a Tianjin Hukou, being a housewife and having higher education level were associated with lower prevalence of any mental disorder and of mood disorders. Our results indicate that mental disorder prevalence in Tianjin is considerable and that mental disorders are steadily being reported more commonly in China in a period of strong development and urbanization. Some of the identified correlates of mental disorder prevalence could be used to target and/or profile persons in need of preventive intervention.

Chapter 4 describes the rates of mental health stigma and MHL, the correlates of stigma and MHL, and the association between MHL and stigma in the Tianjin population. Results showed that the general population in Tianjin perceived much

higher discrimination rather than devaluation to patients with mental disorders. With regard to MHL, most people were not familiar with the causes, treatments and prevention of mental illness. Living in a rural area, being younger, having a lower education level, having a lower per capita family income, not having a job, and/or being a farmer were related to higher levels of mental health patient devaluation and lower MHL score. The results indicate that there is room for improvement with regard to levels of public stigma and MHL in Tianjin. Providing psychoeducation to improve public MHL could also contribute to reduction of public stigma. The identified correlates low MHL could help to identify target groups for such psychoeducation.

Chapter 5 describes the investigation of help-seeking rates in healthcare and non-healthcare settings and the correlates of help-seeking behavior in people with mental disorders living in the Tianjin community. The results indicate that only a small percentage of persons with mental disorders in the Tianjin region actually seek help, and among those who do, variations in the types of help-seeking may be partially explained by demographic and clinical characteristics. Female gender, younger age, 6-7 years of education, low income, a psychotic disorder and having  $\geq 2$  disorders were associated with higher odds of help-seeking.

Chapter 6 reports a systematic review to gain insight into available mobile mental health apps in China as of December 2018. The review identified 172 mental health apps in China, which can be categorized into five groups including psychological counseling apps, assessment apps, stress relieve apps, psychoeducation apps, and multipurpose apps. Evaluation of each app revealed that many apps function as a means to establish contact between patients and care providers, rather than actually taking over tasks from or replacing care providers. In addition, there is a lack of apps that actually target psychiatric patients, rather than the general population. The results indicate that mobile-based mental health apps should be developed not only for general population but also for patients with mental disorders.

In Chapter 7, the main findings, methodological considerations, implications for clinical practice and future research are discussed subsequently. Due to the carefully planned design of the TJMHS, reliable and representative results about the mental health situation in Tianjin were obtained. The observed rates of mental healthcare use, perceived stigma and MHL provide clear cues for future development of mental health prevention and/or treatment strategies in the area. New directions for future

research could be focused on preventing mental disorders in adolescents and intervening on common mental disorders.



## NETHERLANDSE SAMENVATTING

Dit proefschrift presenteert de resultaten van de Tianjin mental Health Survey (TJMHS). Het eerste doel was om de prevalentie van de huidige en levenslange prevalentie van DSM-IV psychische stoornissen en hun sociaal-demografische determinanten te schatten bij volwassenen van 18 jaar en ouder. Het tweede doel was om het niveau van kennis over geestelijke gezondheid en stigmatisering van psychiatrische patiënten te beoordelen. Het derde doel was om de mate waarin patiënten hulp zoeken in formele en informele zorgomgevingen in kaart te brengen. Het laatste doel was om momenteel beschikbare mobiele geestelijke gezondheidsapps in China te evalueren.

Hoofdstuk 2 geeft een gedetailleerd overzicht van de samplingmethoden, instrumenten en onderzoeksprocedures die in de TJMHS werden gebruikt. Een twee-fasen ontwerp met een screeningfase en een diagnostische fase werd gebruikt. Een uitgebreide versie van de General Health Questionnaire-12 werd gebruikt om een verrijkte steekproef van personen met een verhoogd risico op psychische stoornissen te identificeren in de eerste screeningfase. Het SCID interview werd vervolgens gebruikt in de tweede diagnostische fase om te bepalen of er al dan niet een DSM-IV psychische stoornis aanwezig was. Er werden strenge methoden voor training, samplen en kwaliteitscontrole toegepast om de kwaliteit van de onderzoeksresultaten te optimaliseren.

In hoofdstuk 3 worden de prevalentie, aanvangsleeftijd en sociaal demografische correlaten van psychische stoornissen bij volwassenen van 18 jaar en ouder gepresenteerd. We vonden dat de levenslange en huidige (1-maand) prevalentiepercentages voor een psychische stoornis respectievelijk 23,6% en 12,8% waren. Stemmingsstoornissen, angststoornissen en stoornissen door middelengebruik waren de meest voorkomende psychische stoornissen. Gescheiden/weduwnaar zijn, een Tianjin Hukou hebben, huisvrouw zijn en een hoger opleidingsniveau hebben, waren geassocieerd met een lagere prevalentie van psychische stoornissen en stemmingsstoornissen. Onze resultaten geven aan dat de prevalentie van psychische stoornissen in Tianjin aanzienlijk is en dat psychische stoornissen steeds vaker worden gemeld in China. Dit gaat samen met sterke economische en sociale ontwikkelingen en verstedelijking. Sommige van de



geïdentificeerde correlaten van de prevalentie van psychische stoornissen zouden kunnen worden gebruikt om doelgroepen te profileren voor preventieve interventies.

Hoofdstuk 4 beschrijft de resultaten met betrekking tot (1) geestelijke gezondheidskennis en stigma, (2) de sociaal-demografische correlaten correlaties van deze kennis en stigma, en (3) de associatie tussen stigma en kennis in de bevolking van Tianjin. De resultaten ten aanzien van stigma lieten zien dat in de bevolking meer discriminerende dan devaluerende attitudes jegens (ex-) psychiatrische patiënten voorkomen. Met betrekking tot kennis niveaus over geestelijke gezondheid, waren de meeste mensen niet bekend met de oorzaken, behandelingen en preventie van psychische aandoeningen. Wonen in een landelijk gebied, jonger zijn, een lager opleidingsniveau hebben, een lager gezinsinkomen hebben, geen werk hebben en/of boer zijn, waren allemaal gerelateerd aan hogere stigma- en lagere kennisniveaus. Deze resultaten geven aan dat hier ruimte is voor verbetering in Tianjin. Het verstrekken van psychoeducatie om de publieke kennis over geestelijke gezondheid te verbeteren zou kunnen bijdragen aan de vermindering van het publieke stigma. De geïdentificeerde sociaal-demografische correlaten zouden kunnen helpen bij het definiëren van de doelgroepen voor dergelijke psychoeducatie.

Hoofdstuk 5 beschrijft het onderzoek naar percentages van patiënten die hulp zoeken voor hun psychische stoornis, zowel in als buiten de gezondheidszorg in Tianjin. De resultaten geven aan dat slechts een klein percentage van de personen met een psychische stoornissen daadwerkelijk hulp zoekt. Vrouwelijk geslacht, een jongere leeftijd, het hebben van 6-7 jaar opleiding, het hebben van laag inkomen, het hebben van een psychotische stoornis en het hebben van 2 of meer psychische stoornissen hing samen met een hogere kans op hulp zoeken.

Hoofdstuk 6 rapporteert een systematische review dat als doel had om inzicht te krijgen in de beschikbare mobiele geestelijke gezondheidsapps in China (tot en met december 2018). Een review van beschikbare apps in de Chinese app-stores identificeerde 172 mentale gezondheidsapps in China, die kunnen worden onderverdeeld in vijf groepen: apps voor psychologische counseling, assessment, stressverlichting, psychoeducatie, en multifunctionele apps. Uit evaluatie van elke app bleek dat veel apps met name functioneren als een middel om contact te leggen tussen patiënten en zorgverleners, in plaats van taken over te nemen van zorgverleners of deze te vervangen. Bovendien is er een gebrek aan apps die zich

daadwerkelijk op psychiatrische patiënten richten in plaats van op de algemene bevolking. De resultaten geven aan dat mobiele geestelijke gezondheidssapps niet alleen moeten worden ontwikkeld voor de algemene bevolking, maar ook voor patiënten met psychische stoornissen.

In hoofdstuk 7 worden de belangrijkste bevindingen, methodologische overwegingen, implicaties voor de klinische praktijk en toekomstig onderzoek nader besproken. Vanwege het zorgvuldig geplande ontwerp van de TJMHS werden betrouwbare en representatieve resultaten over de geestelijke gezondheidssituatie in Tianjin verkregen. De waargenomen percentages van gebruik van geestelijke gezondheidszorg, en waargenomen geestelijke gezondheidskennis en stigma bieden duidelijke aanwijzingen voor toekomstige strategieën om geestelijke gezondheidspreventie en/of behandeling in het gebied verder te ontwikkelen. Toekomstig onderzoek kan gericht zijn op het voorkomen van psychische stoornissen bij adolescenten en het ontwikkelen van interventies voor de meest voorkomende psychische stoornissen.



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## ABOUT THE AUTHOR

I was born in 1983 in Henan province in China. After graduating from high school in Puyang city in 2001, I started with a bachelor Clinical Medicine at Xinxiang Medical College. I was very interested in psychiatry and decided to be a psychiatrist. In 2006, I started master Clinical Psychology and finished a thesis titled 'Event-Related Potentials in Response to Emotional Words in Patients with Major Depressive Disorder'. In 2009, I entered Tianjin Anding Hospital and participated in a standardized training program for resident psychiatrist. Now I am a deputy chief psychiatrist in Tianjin Anding Hospital.



In 2011, I participated in the first Tianjin Mental Health Survey and learned how to design an epidemiological survey in general population and how to conduct fieldworks. In 2013, I also was involved in China Mental Health Survey which is a nationally representative survey of mental health in China. Because of the methodological differences of the two big surveys, I accumulated experience about mental health surveys using different diagnostic instruments. In 2015, I started my Sandwich PhD program which included 2 years' study at the department of Department of Psychiatry at the University Medical Center Groningen and 2 years' study in Tianjin Anding Hospital. Since September 2017, I work as a project manager of the Second Tianjin Mental Health Survey. I will do more work in adolescents and elder people using electric intervention methods to provide mental health service for those population in the future.



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